



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-3503 FAX (603) 271-5171



May 14, 2004

LETTER OF DEFICIENCY #WSEB 04-067
Certified Mail #7000 0600 0023 9933 8477

Donald Correll
Pennichuck Water Works, Inc.
25 Manchester Street
PO Box 1947
Merrimack, NH 03054-1947

Subject: Newmarket - Public Water System: Great Bay Water System (EPA #1732030)

Dear Mr. Correll

The records of the NH Department of Environmental Services (DES) show that Great Bay Water System is classified as a public water system (PWS), as defined by RSA 485:1-a. A PWS is defined as any water system supplying 15 or more services, or 25 or more people for 60 or more days per year. As such, the water system owner is required to submit samples according to the system's established Master Sampling Schedule to the State laboratory or a State-certified laboratory in compliance with NH Administrative Rule Env-Ws 321 through 330.

The federal Environmental Protection Agency promulgated new radionuclide rules governing the acceptable levels of radionuclides in the Nation's community public water systems. Consequently, DES recently adopted new rules in conformance with the federal requirements. New maximum contaminant levels (MCLs) were established and additional requirements instituted for the currently regulated radionuclides. Note that the new Uranium standard became effective in January, 2004 and compliance will be determined upon completion of four quarterly samples. As a result of the new regulatory requirements, prompting a review of historical water quality data by senior DES staff, we determined that the following have been in violation.

SITE: #003 – BRW 4 /790° Northeast of Main Pump House

Contaminant	MCL (units)	Historical range	Latest result (date)	Violation (yes/no)
Compliance gross alpha	15 pCi/L	19.9 – 46 pCi/L	46 pCi/L (3/10/04)	yes
Uranium	30 ug/L	3.2 – 3.3 ug/L	3.3 ug/L (3/10/04)	no
Radium 226 & Radium 228	5 pCi/L	10.4 – 12.1 pCi/L	10.4 pCi/L (3/10/04)	yes

DES believes the MCL violation(s) can be corrected and future violations prevented by taking the following actions:

- 1 **By May 31, 2004**, provide public notice of the exceedence(s) following the guidelines on the enclosed public notice handout. Continue providing public notice **each calendar quarter** for as long as the exceedence occurs; and
- 2 Upon request, you shall make alternate (*i.e.* bottled) water available for human consumption. If bottled water is used, the source must be an approved source, monitored in accordance with Env-Ws 389;
- 3 **By May 24, 2004**, provide proof of public notice to this office following the guidelines on the enclosed public notice handout.
- 4 **By May 31, 2004**, retain the services of a qualified consultant to address the water quality violation(s) and notify DES, in writing, of the name of the consultant hired. The consultant should review all existing water quality data prior to making recommendations for correcting the MCL violation(s); and
- 5 **By July 14, 2004**, submit to DES the consultant's report, which shall contain the consultant's recommendations, and cost estimates, along with an implementation schedule to correct the MCL violation(s). A maintenance schedule must be included if treatment is proposed. DES must approve the consultant's report/recommendations, the maintenance schedule, and the proposed implementation schedule prior to any work being done on the system; and
- 6 By the DES-approved correction date, take the corrective action as approved by DES. Notify DES in writing upon completion of the action(s) taken; and
- 7 Continue to sample in accordance with your Master Sampling Schedule, which includes **quarterly sampling for radionuclide(s)**.

In the event compliance is not achieved within this period, DES may take further enforcement action. These actions include issuing an order requiring the deficiencies to be corrected, initiating an administrative fine proceeding, and/or referring the matter to the NH Department of Justice for imposition of appropriate penalties.

The information as requested above should be addressed as follows or faxed to (603) 271-5171

Anne Bailey
Department of Environmental Services
Water Supply Engineering Bureau
29 Hazen Drive, PO Box 95
Concord, NH 03302-0095

Further review of your system's water quality indicates that your system has had a history of Iron and Manganese exceedences. These levels have consistently been above the secondary maximum contaminant levels (SMCL) of 0.3 mg/L and 0.05 mg/L, respectively. In general these contaminants pose aesthetic concerns (e.g. taste, odor, or staining) and are not currently a health concern. Although the SMCLs are enforceable, corrective action will not be required unless consumer complaints arise. It is important to also note that while a Radon standard has not yet been finalized, your levels have ranged from 1716 - 1800 pCi/L. The most recent Federal standard proposed was 4,000 pCi/L if a Multimedia Mitigation Program (MMM) was in effect for that community. Without such an MMM program the maximum acceptable Radon level in drinking water could not exceed 300 pCi/L.

For your information, fact sheets on Mineral Radioactivity and Removing Iron and Manganese from Drinking Water are available at: <http://www.des.state.nh.us/ws.htm>. These include general information, health effects and removal options. Please be reminded that proposed treatment alternatives should take into consideration all water quality parameters as well as current and future quantity needs. Bernie Lucey, P.E., may be able to answer questions concerning treatment for the aforementioned contaminant(s). He may be reached at (603) 271-2952 or via email at blucey@des.state.nh.us. If you have any questions regarding this letter, please contact Selina J. Makofsky, P.G., at (603) 271-4109 or by email at smakofsky@des.state.nh.us.

Sincerely,

COPY

Rene Pelletier, P.G., Manager
Land Resource Programs

h:\wseb\enfmon\enforce\lods\chem mon\2004\rad\1732030.lod.04-067.doc

Encls: Master Sampling Schedule
Public Notice Form

cc: Gretchen R. Hamel, DES Legal Unit Administrator (w/out encl.)
Bernie Lucey, P.E., DES (via email w/out encl.)
Jeanne D. Lawson, DES (w/out encl.)
Town of Newmarket Health Officer (w/out encl.)
Christopher Countie, Pennichuck Water Works, Primary Contact/Primary Operator
NH Dept. Public Utilities Commission
Beth Deabay, EPA Region 1 (via email w/out encl.)
EPA, Region 1 (w/out encl.)
File